



NORTHEAST EXTENSION CONNECTION

FALL 2018

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Back of the Envelope Economics Custom Farming Rates



By Blake Hauptman
Ag and Hort
Educator

One of the most common questions I get asked and most challenging to answer is... "What are the average custom farming rates in so and so county?" Often folks are disappointed when I tell them that Wyoming no longer collects statewide custom farming statistics due to the very low number of people who were reporting them. Nebraska still reports custom farming rates and you can go to this website to find the most current numbers.

<https://agecon.unl.edu/custom-rates>

I want you to take a look at a quote from the Nebraska publication, and hopefully you will see why this can be a hard question to answer.

"Be aware that average custom rates reported may not cover all of an operator's costs. Rates change from year to year due to expense changes and the availability of

custom operators."

"The rates provided in this report do not necessarily measure the full economic cost of performing the work specified. Some custom operators may only charge for fuel and labor. Other operators may charge for all costs, including depreciation on equipment, personal property taxes, a charge for risk, and a return to management. Field conditions such as size of area, terrain, and location will vary, which could partially account for the range in the rates charged."

Because custom rates can vary for so many different reasons, I think these reports are best used as a starting point to help with a negotiation between two parties. I also think that it is helpful to have a basic understanding of how to estimate the costs of owning and operating farm equipment.

What are the costs of owning equipment?

Depreciation of equipment, is value that is leaving the business. Annual depreciation cost can simply be estimated by taking the purchase price minus the salvage value, divided by the number of years you plan on using the equipment. If you spend \$100,000 on machinery, plan on using it for 10 years and

$$\frac{\$100,000 - \$30,000}{10 \text{ years}} = \$7,000$$

then sell it for \$30,000, you'd have \$7,000 in annual depreciation cost.

Another common ownership cost would be the interest rate you pay to the lender to purchase the equipment. Even if you pay cash for the equipment you should consider factoring-in a percentage as a lost opportunity to invest that capital somewhere else that could have generated a financial return (e.g. stocks). In this example we are going to charge ourselves a 7% interest rate.

To calculate this cost, we need to determine the average value of the machinery for the number of years that we plan on owning the equipment. To do this we simply take the purchase price plus the expected salvage value of the equipment and divide that by two. This gives us an average value of \$65,000 during the 10 year time frame that we owned the farm equipment. Then we take the \$65,000 and multiply that by the 7% rate that we decided we would charge our business. This equals \$4,550.

$$\frac{\$100,000 + \$30,000}{2} = \$65,000$$

$$\$65,000 \times 0.07 = \$4,550$$

Additional ownership costs to consider might be taxes, insurance, and building rental costs if the equipment is parked inside for part of the year.

What are your operating costs?

For maintenance and repairs, you need to estimate how much money a year should be put into a savings account to cover all maintenance and repair bills during the 10 years that you own the machinery.

In this example, let's figure 3% of the average value of your owned farm equipment will be set aside to cover this year's and future maintenance and repair bills.

\$65,000 multiplied by our estimated 3% annual maintenance and repair costs, is equal to a \$1,950.

$$\$65,000 \times 0.03 = \$1,950$$

A way to determine your labor cost on a per acre basis is to first estimate how many acres you can farm in an hour. An acre is 43,560 square feet. Therefore, one mile (5,280 feet) multiplied by 8.25 feet is equal to one acre.

If you have a 30 foot wide chisel plow and could farm at an average speed of 4 miles per hour, you could farm 14.5 acres per hour. It's actually probably less, when you consider turnaround time.

$$\left(\frac{30 \text{ feet}}{8.25 \text{ feet}} \right) * 4 \text{ mph} = 14.5 \text{ acres/hour}$$

For this example, let's say that labor is worth \$15/hour. It will cost you about \$1/acre in labor at this rate.

Fuel costs can be determined by knowing how much fuel your equipment uses in an hour when farming an individual field (this could vary due to field conditions). If your tractor consumes 10 gallons per hour and let's just say at \$3 diesel prices to make the math easy, it will cost you \$30/hour or about \$2/acre.

What are your total costs?

Annual Overhead Costs

Depreciation = \$7,000

Interest rate = \$4,550

Maintenance and repair = \$1,950

Total annual overhead costs = \$13,500

Annual Direct Costs

Labor = \$15/hour or \$1/acre

Fuel = \$30/hour or \$2/acre

Total annual direct costs = \$45/hour or \$3/acre

If we do a 100 hours of custom chisel plow work every year our total cost per hour would be:

$$\frac{\$13,500 \text{ overhead costs}}{100 \text{ hours}} = \$135/\text{hour}$$

$$+\$15/\text{hour (labor)}$$

$$+\$30/\text{hour (fuel)}$$

$$\text{Total Costs} = \$180/\text{hour}$$

Remember that we could farm 14.5 acres/hour with our tractor and chisel plow. Therefore, it will cost us about \$12.40/acre.

Summary

Your numbers are going to be different than my example. You might be running older equipment, so your depreciation costs are less. However, it is likely that your repair and maintenance costs would be higher. There also may be other expenses that you want to consider charging that I didn't include in my example (risk, return to management, etc.)

I am not suggesting that you use any of my percentages or figures that I came up with. You need to determine what is appropriate for your own operation. At the University of Wyoming Extension, we have Farm and Ranch Economic Specialists who have tools and can provide expertise to help you get your numbers more precise. One such tool can be found by going to this website <http://rightrisk.org/appliedriskanalytics/default.shtml> Please call your local extension office for guidance if you are looking for more information on this subject.

Irrigated Perennial Cool-season Grass Hay Trial



Blaine Horn
Range Educator

The most common grasses used for hay production under irrigation in northeast Wyoming are smooth and meadow brome. Although they are productive they usually enter anthesis (blooming) by mid-June. The optimum stage for haying with regard to yield and quality is pre-anthesis. For hay operations with significant acreage this could result in some of

the hay being lower in quality than what a lactating beef cow or sheep ewe requires due to the maturity of the grasses at harvest. Likewise, small hay operations dependent upon custom harvesters often see their fields hayed when these grasses are at a later maturity than desired. Knowledge about how various perennial cool-season grasses with different maturity dates perform in this region would help hay producers in selecting grasses that better fit their operations.

With this in mind, 14 perennial cool-season grasses were seeded into randomized plots within eight blocks under a center pivot irrigation system at the Sheridan Research and Extension Center's Adams Ranch in September 2014. The grasses: 'Manchar' and 'Carlton' smooth brome; 'MacBeth' and 'Paddock' meadow brome; 'Latar' and 'Profile' orchard; 'Fawn' and 'Texoma MaxQ II' tall fescue; 'Oahe' and 'Rush' intermediate wheatgrass; 'Luna' and 'Manska' the pubescent form of intermediate; and 'Climax' and 'Tuukka' timothy. All eight blocks received the same amount of irrigated water in summer 2015 but in 2016, 2017, and 2018 four of the blocks received twice as much water as the other four (Table 1).

The grasses were slow to establish in 2015, especially the bunch type (orchard, tall fescue, and timothy), but in 2016 all the grasses were well established, except 'Climax' timothy. Harvest of the grasses to assess their hay and regrowth forage yields along with forage quality was done in 2016, 2017, and 2018. Standing crop of the bromes, orchards, and tall fescues were harvested on 16, 15, and 20 June in 2016, 2017, and 2018, respectively, and of the

wheatgrasses and timothies on 30 June in 2016 and 2017, and 5 July in 2018. The orchards mature the earliest with 'Profile' being a few days earlier than 'Latar'. Smooth and meadow brome and tall fescue reach anthesis a few days later than 'Latar'; whereas the timothies and intermediate wheatgrasses are around 10 and 14 days later, respectively, than the bromes and tall fescues.

Table 1. Inches of precipitation and irrigated water.

Year	Precipitation			
	April	May	June ¹	Total
2016	4.10	1.10	0.32	5.52
2017	4.22	1.94	0.69	6.85
2018	1.84	3.13	0.87	5.84
	Irrigated ¹		Total ²	
Year	High	Low	High	Low
2016	1.65	0.85	7.17	6.37
2017	2.66	1.39	9.51	8.24
2018	2.31	1.15	8.15	6.99

¹Precipitation & Irrigated: June 1-15 2016; 1-14 2017; and 1-19 2018. ²Total: Precipitation + irrigated.

Year	Precip ³	Irrigated ³		Total ³	
		High	Low	High	Low
2016	5.53	3.65	1.86	9.20	7.41
2017	7.10	4.10	2.14	11.20	9.24
2018	6.39	3.81	1.59	10.20	7.98

³Amounts: 1 April-29 June 2016 and 2017, & 4 July 2018

Hay yields (12% moisture) for 2016, 2017, and 2018 are reported in Table 2. Late summer regrowth yields will be reported in a future newsletter. The intermediate wheatgrasses produced the most hay overall regardless of irrigation level but their yields declined by an average of 10% each year. 'Fawn' tall fescue and 'Profile' orchard produced the least amount of hay but both grasses produced over twice as much in 2017 as they did in 2016.

The other bunchgrasses in the study also produced more hay in 2017 compared to in 2016 by an average of 160%. This increase in hay yields for the bunchgrasses was most likely due to an improvement in their stands. However, all the grasses, except 'Climax' timothy, yielded an average of 15% less hay in 2018 compared to in 2017. This difference may have been due to May and June temperature differences between the two years. May 2018 was four degrees warmer than in 2017 but its June temperature was three degrees cooler. This could have accelerated grass growth in May 2018 but then it slowed during June.

Why 'Carlton' smooth brome and 'Paddock' meadow brome produced less hay in 2018 compared to in 2016 by 36% and 42%, respectively, is not clear as 2018 hay yields of 'Manchar' smooth brome and 'MacBeth' meadow brome were only 15% less.

An additional inch of irrigated water during the first two weeks of June (Table 1) was not enough to increase hay yields of the bromes, orchards, and tall fescues (Table 2).

Likewise, another additional inch during the last two weeks of the month was not sufficient to affect hay yields of the intermediate wheatgrasses or timothies. Whether more irrigated water in June would have increased hay yields of the grasses is hard to say, especially when most of the rhizomatous species (bromes and wheatgrasses) had their best hay yields in 2016 which averaged two inches less moisture than in 2017. Note: 150 pounds of actual nitrogen was applied to the plots in December 2015 (ground not frozen), and in April 2017 and 2018.

A 1200-lb beef cow at peak lactation requires 10% crude protein and 0.60 Mcal NEm/lb in her diet and a 165-lb sheep ewe with twin lambs requires 15% crude protein and 0.70 Mcal NEm/lb. All the grasses, except 'Paddock' meadow brome in 2016 and 2017 and the wheatgrasses in 2017, contained enough protein for the beef cow but not the sheep ewe (Table 2). With regard to NEm, all the grasses provided enough for the beef cow but not the sheep ewe.

Table 2. Perennial cool-season grass hay yields (tons/acre) in 2016, 2017, and 2018 under two irrigation regimes (High and Low) and average %crude protein and Mcal/pound of Net Energy maintenance (NEm) in 2016 and 2017.

Grass	Variety	2016		2017		2018		Average		Crude Protein		NEm	
		High	Low	High	Low	High	Low	High	Low	2016	2017	2016	2017
Smooth brome	Carlton	5.1	4.9	4.0	3.4	3.1	3.3	4.0	3.9	12.7	12.9	0.65	0.65
	Manchar	4.1	3.8	3.9	4.2	3.1	3.6	3.7	3.9	12.4	13.8	0.64	0.65
Meadow brome	MacBeth	3.4	4.3	3.8	4.1	3.1	3.3	3.4	3.9	11.3	10.2	0.64	0.60
	Paddock	5.0	5.0	3.7	4.2	2.6	3.2	3.8	4.1	9.5	9.0	0.62	0.59
Orchard	Latar	2.5	2.9	3.8	4.9	4.0	3.5	3.4	3.8	11.7	12.8	0.64	0.62
	Profile	1.5	2.0	3.7	3.7	3.0	3.0	2.7	2.9	13.0	9.8	0.66	0.60
Tall fescue	Fawn	1.8	1.3	3.8	4.2	3.0	3.0	2.9	2.9	13.5	10.2	0.67	0.62
	MaxQ II	3.0	3.3	4.3	4.3	3.4	3.8	3.6	3.8	10.4	11.7	0.65	0.63
Intermediate wheatgrass	Oahe	5.8	5.1	5.1	4.8	4.2	4.6	5.0	4.8	10.2	8.6	0.61	0.60
	Rush	5.6	5.4	5.0	4.9	4.4	4.8	5.0	5.0	9.8	9.1	0.60	0.60
Pubescent form	Luna	5.9	5.6	5.1	5.1	4.3	4.9	5.1	5.2	10.2	9.0	0.62	0.60
	Manska	5.4	5.4	5.3	5.1	4.2	4.4	5.0	5.0	10.8	8.4	0.62	0.60
Timothy	Climax			3.5	3.3	4.3	3.7	3.9	3.5		10.5		0.63
	Tuukka	3.2	1.9	4.7	4.4	4.4	4.3	4.1	3.5	11.8	10.1	0.68	0.63

Are You Financially Fragile?



By **Michelle Pierce**
Community
Development
Educator

Many Americans are struggling to pay for everyday items such as housing, transportation and groceries. The everyday items do not include any financial emergencies.

According to Forbes (January 2018 article), 44% of Americans do not have enough cash to cover a \$400 financial emergency. Emergencies are disguised as a flat tire, broken washer, sick child or animal, a health issue, and more. What

are the short-term and long-term consequences for families who are considered financially fragile? Families who are at risk, spend more time and money dealing with financial shocks. Financial shocks are crises and usually do not allow for slow decisions. An example would include having enough money to cover your rent but not groceries or fuel to get to work. Which bill do you pay first? Rent, groceries, or fuel?



According to the National Financial Education Foundation, (NEFE) the definition for financial fragile is an individual's ability to come up with \$400 immediately and with \$2,000 within 30 days. This NEFE study looks at an individual's ability to cope with unexpected costs within a short time frame. Approximately 36% of Americans are considered "financially fragile." These demographics include every age (aged 18 to 90), all socio-economic classes, all genders, and every type of educational attainment (from no high school to doctorate degrees). No demographic was untouched from experiencing financial troubles. Other key findings included marriage and employment of any kind makes women less likely to be financially fragile. Those with two

or more dependent children were more likely to be financially fragile. In addition, the higher the educational level, the lower probability of being financially fragile. The short-term consequences to being financially fragile are: going from crisis to crisis, being scared for what may happen to you, your family, and your pets, having zero stability, relying on others (government services), poor credit, unpaid bills, harassing phone calls, and more. The long-term effects are multiple. Health consequences from stress and poor eating, no retirement savings, no health insurance plus more.



This is alarming in the United States, considering we produce 20 trillion dollars' worth of goods and services every year. We do not lack resources nor production, it appears that we need to use our resources in more strategic ways. Many Americans do not have a budget and have no idea how their resources are being used within their home. Becoming aware and changing your behavior starts on an individual level.

What would you do if you had a financial emergency?

To cover immediate money emergencies, these may be options:

1. Use your emergency fund: cash from checking or savings.
2. You may charge the amount on your credit card and wonder how you will pay it when the bill arrives.
3. You may borrow money from family and/or a friend, which may strain relationships.
4. Sell something that you own for quick cash.
5. Take out a loan at a bank, financial institution, or

payday loan company.

6. Get a payday loan and pay high fees to the lender.
7. Go to a social service agency that may provide help with basic needs.

To address your emergency, one needs to remember, you are still in control. The Consumer Financial Protection Bureau (CFPB) recommends eight tools, if you are Behind on Bills. It is important to write these items down and create a system for yourself to take care of your money.



First, determine your income. There may be several places you receive money. A paycheck is income, child support, government assistance, a second job, selling something, receiving a gift/cash, rental income, any money that is brought into the household needs to be counted.

Second, determine where your money goes. Paying bills, who do you pay, amount, and when is it due? What is the monthly payment and the total amount owed?

Third, plug your bills into a calendar, so that you can visually see what and when is due.

Fourth, set a goal. Asking the question, what is one thing I want to change?

Fifth, ask yourself how you can get extra money out of your situation? Can you sell something on Facebook or conduct a service for someone such as babysit or mow a lawn? If you have a specialized trade or talents, you may want to use them to make extra money.

Sixth, prioritize bills. How will you make tough choices

in the coming weeks and months?

Seventh, how do you deal with debt-collectors? Get several strategies outlined.

Eighth—who can you ask for help? Looking at community resources.

Without systems and plans, many American's are left to figure it out on their own. There are agencies such as financial institutions, banks, or credit unions that can help assist you with a budget. There are Financial Literacy resources at universities, at financial service providers, and on the internet. Be aware of the salespeople who have one thing in mind, selling you something, not your financial education. Financial education can take a life-time of learning and re-strategizing your money game. Ideally, it is best to deal with money issues when you are not in a crisis and have time to think

<https://www.forbes.com/sites/danipascarella/2018/04/03/4-stats-that-reveal-how-badly-america-is-failing-at-financial-literacy/#22f678422bb7>

https://www.nefe.org/Portals/0/WhatWeProvide/PrimaryResearch/PDF/NEFE%20Financial%20Fragility%20Report_web.pdf?ver=2018-06-19-143219-340



Apples at the Core of Fall Cooking



By **Vicki Hayman**
Nutrition and
Food Safety
Educator

Cool breezes swirl around you; fallen leaves crunch under your feet. The scents of cinnamon and nutmeg tickle your nose. Nothing says autumn quite like an apple that is sweet, crisp, tart, and juicy!

There are more than 2,500 kinds of apples grown in the United States. While apples are commonly eaten directly out of hand, many varieties are a great

cooking fruit. Their culinary versatility shows in many ways.

When buying apples, choose those without any bruises or soft, mushy spots. They should be firm for their specific variety (a McIntosh will not be as firm as a Granny Smith). Look for fruit with shiny skin; dull skin hints at a lack of crispness and flavor.

Apples quickly lose their crispness at room temperature. To keep apples in the fridge, place them in a perforated plastic bag in the crisper drawer.



To keep apples for an extended period, wrap each one in non-colored ink newspaper and then store in a dark, cool place like the cellar or the garage.

The best way to prevent apple browning is to soak the cut fruit in a saltwater solution of half a teaspoon of kosher salt per cup of water for 10 minutes, then drain and store until ready to use. The mild salt flavor can be rinsed off with tap water before serving.

In my opinion, the best eating apple is the Honeycrisp. This apple has exceptionally crisp, juicy, sweet-as-honey flesh with just a hint of tartness. I prefer Granny Smith, Braeburn, Honeycrisp, and Pink Lady (Cripps Pink) for cooking and baking. When baking with apples, keep in mind the texture is important. Good baking apples have a balance of intense sweet-tart flavor and will not fall apart when cooked. They should hold their shape and not turn into mush

– unless you are making applesauce!

When it comes to cooking, apples are most closely associated with desserts like pies and crisps. However, their sweet-tart flavor also lends itself to savory dishes. One traditional pairing is apples with pork; the fruit's sweetness complements the meat's savory flavor.

Use apples to add a fall spin to your favorite salads. Crisp apples add taste and texture to a salad and can pull double-duty in the salad dressing as well. Roasted apples and cheddar cheese turn an ordinary mixed green salad into something extra special. Apples also pair really well with cabbage; toss slices of crisp, tart apples into your slaws for flavor and crunch.

Apples add texture and complexity to sandwiches. Shake up your usual lunch routine with a turkey, apple, and bacon sandwich – what a delicious combination! Add apple slices to your favorite panini, such as ham and brie with honey mustard. Try a fun



take on traditional tuna salad with cucumbers and crunchy apples. Make an apple, sauerkraut, and cheddar cheese quesadilla. The sweet-tartness of the apple, creaminess of the cheese, and bite of the sauerkraut work together beautifully in this easy hot sandwich. This combination may seem unusual – until you try it!

When you put “an apple a day keeps the doctor away” together with “breakfast is the most important meal of the day,” you just know that having apples for breakfast is a healthy way to start your day. Put apples in your smoothies or shred them into oatmeal, pancakes and muffin batters.

Apples can mingle with pork, vegetables, herbs, apple cider, and cream in a filling dish. Try roasting sausages with apples and parsnips for an easy and delicious



weeknight recipe cooked on a sheet pan. Whip up a simmering bowl of sweet potato and apple soup or curried pumpkin soup flavored with applesauce.

The dynamic duo of apple and pork is wonderful. A pork-and-apple dish is the quintessential fall supper. The smell of roasted meat, sweet apples, and spices will make tummies rumble.

Glam up tonight's dinner with tart apples used to make a sweet and spicy apple salsa that is perfect alongside chili rubbed pork tenderloin.

For an autumn spin on chicken, pair it with hearty barley, diced dried fruit, and the warm flavors of cinnamon and allspice. For a fancy fall dinner,

consider a roasted poultry, potatoes, and apples dish. It is the perfect dinner for a chilly fall night. Try stuffing apples with savory fillings, like ground turkey and sage, for a simple meal.



Onions and apples balance each other beautifully in an elegant frittata. Goat cheese offers the dish its creamy consistency, while the addition of herbs infuses it with a delightfully flavor.

Need a side dish for roast chicken or turkey? Apples add sweet crunch to stuffing for a delicious accompaniment. Roasted Brussels sprouts, crispy bacon, and apples come together to create a simple satisfying side dish. Apple brown sugar baked beans will have everyone asking for seconds. Fans of sweet-meets-savory side dishes will dig a cabbage recipe featuring apples, balsamic vinegar, and brown sugar. For a hint of spice, add a pinch of ginger. Yum!

Apple and cheddar join forces in a quick-but-delicious cheesy apple bread. It is a perfectly mild accompaniment to an autumn meal. Best of all, a full loaf can be whipped up in just over an hour.

All apples are not created equal – at least when it comes to cooking versus eating them fresh. However, regardless of variety, they are all excellent for your health. Apples are a good source of soluble fiber, potassium, and folic acid.

Celebrate the arrival of fall on your dinner plate. Try some of these delicious savory apple dishes for breakfast, lunch, or dinner and enjoy! Be sure to choose the right type of apple for your specific dish.

(Sources: www.bestapples.com; www.fns.usda.gov; www.food.com; www.usapple.org)

ROASTED BRUSSELS SPROUTS & APPLES

Serves 6

- 1 tablespoon olive oil
- 1 teaspoon garlic powder
- 1 teaspoon onion powder
- 1/4 teaspoon black pepper
- 1 pound Brussels sprouts, trimmed and halved
- 1 medium apple, cored and cut into 1-inch chunks)
- 2 Tablespoons dried cranberries
- 2 Tablespoons balsamic vinegar
- 1 Tablespoon honey

Directions

1. Preheat oven to 375°F. Mix oil, garlic powder, onion powder and pepper in large bowl. Add Brussels sprouts and apple; toss to coat well. Spread in single layer on foil-lined 15x10x1-inch baking pan.
2. Roast 30 to 35 minutes or until Brussels sprouts are browned and tender.
3. Meanwhile, mix cranberries, vinegar, and honey in small bowl. Drizzle over roasted Brussels sprouts and apple; toss to coat well. Serve immediately.



Creating a Sense of Belonging Through Youth Programs



By Sara Fleenor
4-H / Youth
Development
Educator

It's hard to be a kid. Trying to figure out who you are and where you belong in the scheme of things; from school, to peer groups, to family order, is a daunting task.

Having a sense of belonging is important in youth development. Belonging is the feeling of being valued, needed, accepted and meaningfully connected to a social network (mindmatters.edu.au). A sense of belonging

improves motivation, health and happiness in youth.



There is a comfort in knowing they aren't alone.

Youth programs are an important component in youth development for the sense of belonging that they provide for kids. Programs, such as 4-H, actively generate belonging and strive to make kids a part of a whole. There are caring adults and other youth with similar interests. There is welcoming in a club and club activities provide a safe space without fear of physical or emotional harm. Feeling connected provide, self-worth and comfort. It protects against feelings of isolation and depression and reduces the risks of alienation.

Current research emphasizes the importance for youth to have opportunities for long-term consistent relationships with adults other than parents. This research suggests that a sense of belonging may be the single most powerful positive ingredient we can add into the lives of children and youth (National 4-H)



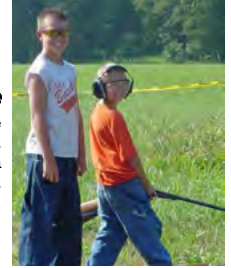
Belonging



- 4-H provides a positive relationship with a caring adult.
- 4-H provides an environment where everyone feels included.
- 4-H provides a safe environment.

Independence

- Youth have an opportunity to feel that they have control over their future.
- Youth have an opportunity to pursue their own interests and abilities.
- Youth make choices.



Generosity



- Youth have an opportunity to value and practice service for others.

Mastery

- Youth are involved in the learning process.
- Youth have an opportunity to master skills.



The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) is an equal opportunity educator and employer.

4-H programs actively engage youth and by being part of a club, it automatically connects youth to peers. Additionally, actively participating in 4-H programs teaches youth life skills which helps to build confidence. Something as small as a 4-H t-shirt ties youth together in a common bond. Encourage youth to participate in 4-H in your community and see the success that sense of belonging inspires.



Not Your Parent's 4-H:

How 4-H Continues to Keep Up With the Times



By **Brittany Hamilton**
4-H/Youth
Development
Educator

Since the first club taking form in 1902 in Clark County, Ohio, 4-H has taken the land by storm becoming the nation's largest youth development program today. The program has held fast to tradition while integrating modern ideas and projects into its framework, thereby making it a timeless organization which continues to effectively serve youth worldwide.

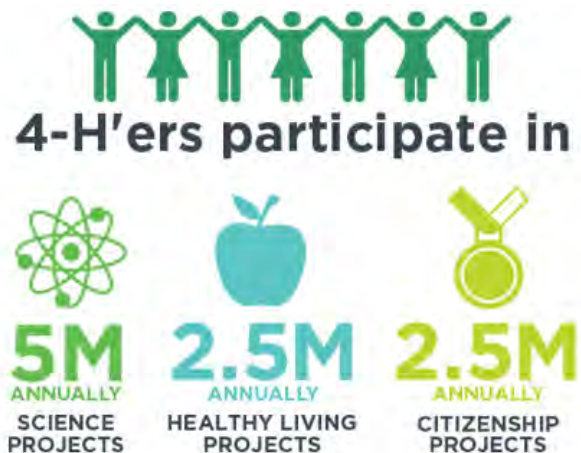
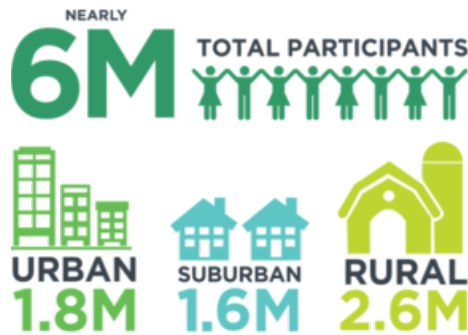
Your parents, grandparents, and generations beyond may remember a very different 4-H from their day. Whereas 4-H began with an agricultural focus and wanted to reach rural areas, it now includes opportunities for youth everywhere to enhance their personal development and growth. 4-H continues to offer programs and projects strong in agriculture and animal science, but it has broadened its horizons to include projects emphasizing robotics, computer science, rocketry, environmental issues, and other STEM (Science, Technology, Engineering, and Math) related projects to meet the needs and interests of youth today.

The 4-H organization attempts to help youth tackle the problems and challenges facing the world through hands-on learning. Its mission is to empower youth and their families with the skills needed to be contributing, proactive citizens in the community as well as become the doers and thinkers of tomorrow.

In accordance with this mission, the 4-H National Youth Science Day has chosen computer science as its focus and created a project called Code Your World. Participants learn how to use and create coding in four hands-on learning exercises that connect computer science to their everyday world. It's probably safe to say your parents didn't have projects like this in 4-H as a kid!

Computer science isn't just about coding and writing computer programs as it can teach youth a whole new way of thinking and problem-solving. It can enhance their career development as well. The fields of medicine, agriculture, conservation, business, and architecture are just a few that utilize and depend on new technology and computer science to make their endeavors more efficient. For example, civil engineers use the program called AutoCAD to design different structures. In a world where technology plays such an important role in our lives, it becomes important to keep up with the times and new ideas coming forth, and 4-H is doing just that. According to the Bureau of Labor Statistics, it is estimated that 1.4 million computer science related jobs will be available by 2020. These positions are rapidly becoming the fastest growing and highest paid jobs on the market, and we will need many qualified people to fill them! Some of our youth today will need to be those computer coders of tomorrow. 4-H is one youth organization that is ready to prepare youth for this.

For over 100 years, 4-H has answered the call to train up youth to face the challenges of today. It does so by staying current with the times and ensuring the program provides youth with skills they need to pursue their interests and become successful. Just one example of this was the addition of the computer science project in recent years. While 4-H has changed to incorporate these new ideas and to reach youth in every walk of life, it still remains true to its mission of equipping the next generation for success. There truly is a little something for everyone these days!



Beneficial Beans



By Kentz Willis
Nutrition and Food
Safety
Educator

The Dietary Guidelines for Americans recommends 2-3 cups of legumes per week for health (most American adults eat less than 1 cup). Legumes include foods such as fresh peas and beans, soybeans, peanuts, and pulses. Pulses (what we commonly refer to as beans) include lentils, chickpeas, and dried peas and beans. These dry (or canned) beans are one simple, inexpensive, and tasty way to eat more legumes.

Beans are a healthful source of carbohydrates, fiber, and plant protein and are naturally low in fat and sodium. In addition, beans contain a multitude of vitamins and minerals, including calcium, potassium, iron, and many of the B-vitamins! As with any fiber-rich food, beans should be slowly introduced in the diet, and accompanied by increased fluid intake. This will help to limit potential gastrointestinal side effects.

Beans have an uncommon culinary versatility – they are regularly found in dishes of all kinds: appetizers, breads, soups, side dishes, salads, main dishes, and even desserts! A number of methods can be used to prepare beans – the method you choose will depend on the equipment you have available, time available for preparation, and – most importantly – your preferences for flavor and texture in the bean dishes you enjoy!

Preparing dry beans from scratch can be intimidating for some. To ensure your success, here are the basics for a few of the more common methods:

Long soak: cover beans with room temperature water and soak for 8-12 hours or overnight. Be sure to use enough water! Drain soak water and refill with fresh water. Cook until tender – 1 hour or so.

Quick soak: bring the beans and water to a boil then remove from heat and let stand for 1 hour. Drain soak water and refill with fresh water. Cook until tender – 1-2 hours.

No-soak: double the amount of



Legumes

Fresh Peas
Fresh Beans

Pulses
Lentils
Chickpeas
Dried Peas
Dried Beans

Peanuts
Soybeans

cooking water needed for pre-soaked beans. This requires more energy from your stove – cooking may take 2-4 hours.

Pressure cook: follow instructions from your pressure cooker or trusted recipe. Most beans can be cooked in 5-10 minutes at 15 PSI.

Already cooked: Canned beans have already been cooked and are a great choice when you need to get food on the table quickly. Look for low- or no-salt-added varieties or consider rinsing the beans to remove some of the sodium in the full-salt canned versions.

Soaking and cooking times can vary quite a bit depending on bean type and age, as well as elevation – so *plan ahead!* You can typically expect one pound (2 cups) of dry beans to yield 5-6 cups once cooked, though variety will certainly affect this as well. It is a good idea to rinse and sort through beans ahead of time and remove anything that doesn't look good.

Beans and other legumes have long been a dietary staple for many cultures—dating as far back as 20,000 years!

These ancient cultures knew that beans were easily cultivated and sustained life. Beans are still recognized today for their many health-promoting properties and low cost. If you are working to eat more healthfully and spend less, be sure to take a closer look at the value and versatility of the bean.

NORTHEAST EXTENSION CONNECTION

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CAMPBELL COUNTY: 307-682-7281

Michelle Pierce - Community Development Educator; Kim Fry - 4-H Youth; Cinnamon Lenhart - 4-H/Youth;
Elizabeth Chappell - Cent\$ible Nutrition; Hannah Hopp - Horticulture

CROOK COUNTY: 307-283-1192

Sara Fleenor - 4-H/Youth; Blake Hauptman - Ag and Hort

JOHNSON COUNTY: 307-684-7522

Blaine Horn - Range Educator; Jim Dawson - 4-H/Youth

SHERIDAN COUNTY: 307-674-2980

Kentz Willis - Nutrition and Food Safety; Emily Swinyer - 4-H/Youth; Lori Dickinson - Cent\$ible Nutrition

WESTON COUNTY 307-746-3531:

Vicki Hayman - Nutrition & Food Safety; Brittany Hamilton- 4-H/Youth